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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/607,658	06/27/2003	Jeong-Ju Lee	8836-190 (IB11207-US)	2617

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EXAMINER	
CHEN, ALAN S	

ART UNIT	PAPER NUMBER
2182	

DATE MAILED: 10/12/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/607,658	LEE, JEONG-JU	
	Examiner	Art Unit	
	Alan S. Chen	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *10 July 2006*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-16* is/are pending in the application.

4a) Of the above claim(s) *1-5 and 9-12* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *6-8 and 13-16* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *27 June 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *05/28/2004*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. Applicant's election with traverse of claims 6-8 and 13-15 in the reply filed on 07/10/2006 is acknowledged. The traversal is on the ground(s) that it would not be a serious burden for the examiner to examine the rest of the species. This is found only partially persuasive, wherein after further consideration, Species I and III (claims 6-8 and 13-16) do not pose a serious burden to the examiner, while admittedly being distinct from one another. However, Species II (claims 1-5 and 9-12) is distinct and is divergent enough to warrant separate examination in a separate application. Specifically, species II details a computer system having registers to store the endian information (not required in Species I and II, at least not in the independent claims) as well as requiring a host controller. The dependent claims of species II include details of the registers and structural hardware limitations not required by I and III. It should be further noted that Applicant specifically stated in the interview on May 31, 2006 the intent of not requiring registers for the endian comparison in the method claims (Species II).

The requirement is still deemed proper and is therefore made FINAL. Examiner will consider Species I and III in the following office action.

2. Claims 1-5 and 9-12 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected species, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in the reply filed on 07/10/2006.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 6-8, 13-15 and 16 are rejected under 35 U.S.C. 102(b) as being anticipated by US Pat. No. 5,867,690 to Lee et al. (Lee).

Independent Claims

5. Per claim 6, Lee a method of data transmission of a computer system *(Fig. 5)*, comprising: reading first endian information of at least one peripheral device (*Fig. 5, element 550, data over bus has a specific endian designation)*; determining whether second endian information of the computer system *(Fig. 5, element 510 has a second endian designation)* is identical with the first endian information of the at least one peripheral device *(Column 8, lines 15-40 disclose comparing endian information from address data to determine whether to byte swap, or based on control signals that are issued to the byte swapping device, Fig. 5, element 530, the control signals resulting from whether the endian designation of elements 510 and 520 match)*; byte-swapping data of the at least one peripheral device when the second endian information is different from the first endian information *(Figs. 6 and 7, element 740 signals to swap data when the endian information do not match)*, and transmitting byte-swapped data to a system bus of the computer system *(Fig. 5, depending on the direction of transfer, the data is transmitted according to the correct endian designation of elements 510 and*

520); and transmitting the data of the at least one peripheral device to the system bus when the second endian information is identical to the first endian information *(Column 7, lines 15-20 express states to let the data pass through with no byte swapping)*.

6. Per claim 13, Lee discloses a method of data transmission of a computer system *(Fig. 5)*, comprising: reading first endian information of at least one peripheral device (*Fig. 5, element 550, data over bus has a specific endian designation)*; determining whether second endian information of the computer system *(Fig. 5, element 510 has a second endian designation*) is identical with the first endian information of the at least one peripheral device *(Column 8, lines 15-40 disclose comparing endian information from address data to determine whether to byte swap, or based on control signals that are issued to the byte swapping device, Fig. 5, element 530, the control signals resulting from whether the endian designation of elements 510 and 520 match)*; and byte-swapping data of the at least one peripheral device when the second endian information is different from the first endian information *(Figs. 6 and 7, element 740 signals to swap data when the endian information do not match)*.

7. Per claim 16, Lee discloses a method of data review of a computer system *(Fig. 5, reviews endian designation between processor 510 and 520)*, comprising: reading first endian information of at least one peripheral device *(Fig. 5, element 550, data over bus has a specific endian designation)*; and determining whether second endian information of the computer system *(Fig. 5, element 510 has a second endian designation)* is identical with the first endian information of the at least one peripheral device *(Column 8, lines 15-40 disclose comparing endian information from address data*

to determine whether to byte swap, or based on control signals that are issued to the byte swapping device, Fig. 5, element 530, the control signals resulting from whether the endian designation of elements 510 and 520 match).

Dependent Claims

8. Per claim 7, Lee discloses claim 6, Lee further disclosing the first endian information of the peripheral device is stored in a base address register *(Column 9, lines 35-43, base memory address in peripheral storage, element 520, is bound to a register; Column 1, lines 65-Column 12, lines 5 disclose registers storing data type information used by data elements such as 510, 520 and 530; Column 9, lines 8+ disclose these data type information is used to determine whether to byte swap or not).*

9. Per claim 8, Lee discloses claim 6, Lee further disclosing the second endian information is stored in a system configuration register *(Column 1, lines 65-Column 12, lines 5 disclose registers storing data type information used by data elements such as 510, 520 and 530; Column 9, lines 8+ disclose these data type information is used to determine whether to byte swap or not).*

10. Per claim 14, Lee discloses claim 13, further comprising transmitting byte-swapped data of the at least one peripheral device to a system bus of the computer system *(byte swapped from storage device, element 520, is sent by byte swapping device, element 530, to the system bus, element 540).*

11. Per claim 15, Lee discloses claim 13, further comprising: transmitting the data of the at least one peripheral device to a system bus of the computer system when the second endian information of is identical with the first endian information *(Column 7,*

lines 15-20 disclose the byte swapping device passes through the data without byte swapping if the endian information is the same).

Conclusion

12. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Patents and patent related publications are cited in the Notice of References Cited (Form PTO-892) attached to this action to further show the state of the art with respect to determine endian information between two devices and performing byte swapping.

- US Pat. No. 5,828,853 to Regal discloses two separate systems that may be operating under two different endian modes and performing byte swapping when necessary.
- US Pat. No. 5,572,713 to Weber et al. discloses converting bits of one architecture to a compatible format of another architecture, the format being a type of endian format.
- US Pat. No. 5,519,842 to Atallah et al. discloses accessing memory that has both big endian and little endian formats store therein.
- US Pat. No. 5,524,256 to Turkowski discloses determining whether two sequences from a source and destination are similar through a permutation signal and later determining whether to rearrange one or the sequences or not based on the permutation signal.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Alan S. Chen whose telephone number is 571-272-4143. The examiner can normally be reached on M-F 9am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim N. Huynh can be reached on 571-272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

ASC
09/15/2006

9/15/06